

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1-30. (Cancelled)

31. (Currently Amended) A high performance pneumatic tyre, comprising:

a pair of axially-spaced-apart annular reinforcing elements;

a carcass structure;

a pair of bead fillers;

at least one flipper;

a tread band;

a belt structure; and

at least one pair of sidewalls;

wherein the carcass structure comprises at least one carcass ply,

wherein the carcass structure extends between the annular reinforcing elements,

wherein the carcass structure is secured at axially opposite end portions to

respective annular reinforcing elements,

wherein each end portion is turned up around the respective annular reinforcing

element,

wherein each bead filler is disposed radially outward of the respective annular

reinforcing element,

wherein the at least one flipper at least partially envelops an associated annular reinforcing element and bead filler,

wherein the at least one flipper comprises a plurality of first elongated reinforcing elements that are substantially parallel to each other,

wherein the tread band extends circumferentially around the carcass structure,

wherein the belt structure is disposed circumferentially between the carcass structure and the tread band,

wherein the at least one pair of sidewalls is applied to the carcass structure in axially opposite positions, and

wherein the first elongated reinforcing elements comprise greater than or equal to two metallic elements and less than or equal to five metallic elements, at least one of which is a preformed metallic element, each of the metallic elements having a diameter greater than or equal to 0.05 mm and less than or equal to [0.25] 0.20 mm.

32. (Previously Presented) The tyre of claim 31, wherein each of the first elongated reinforcing elements is preformed.

33. (Previously Presented) The tyre of claim 31, wherein the at least one preformed metallic element is preformed with a deformation of a coplanar type.

34. (Previously Presented) The tyre of claim 33, wherein the at least one preformed metallic element has an undulating-type form.

35. (Previously Presented) The tyre of claim 34, wherein the undulating-type form is a substantially sinusoidal form.

36. (Previously Presented) The tyre of claim 35, wherein the substantially sinusoidal form has a wavelength greater than or equal to 2.5 mm and less than or equal to 30 mm.

37. (Previously Presented) The tyre of claim 35, wherein the substantially sinusoidal form has a wave amplitude greater than or equal to 0.12 mm and less than or equal to 1 mm.

38. (Previously Presented) The tyre of claim 34, wherein the undulating-type form is a helical-type form.

39. (Previously Presented) The tyre of claim 31, wherein the at least one flipper further comprises:

a central portion; and

two leg portions;

wherein the central portion contacts the associated annular reinforcing element, wherein the leg portions extend from respective ends of the central portion, and wherein the leg portions engage the associated bead filler.

40. (Previously Presented) The tyre of claim 31, wherein ends of the at least one flipper are offset from each other.

41. (Previously Presented) The tyre of claim 31, further comprising:

a chafer;

wherein the chafer comprises a plurality of second elongated reinforcing elements,

wherein the second elongated reinforcing elements are metallic, and

wherein the second elongated reinforcing elements are substantially parallel to each other.

42. (Previously Presented) The tyre of claim 41, wherein the second elongated reinforcing elements comprise at least one preformed element having a diameter greater than or equal to 0.05 mm and less than or equal to 0.25 mm.

43. (Previously Presented) The tyre of claim 41, wherein each of the second elongated reinforcing elements is preformed.

44. (Previously Presented) The tyre of claim 42, wherein the at least one preformed element of the second elongated reinforcing elements is preformed with a deformation of a coplanar type.

45. (Previously Presented) The tyre of claim 42, wherein the at least one preformed element of the second elongated reinforcing elements has an undulating-type form.

46. (Previously Presented) The tyre of claim 45, wherein the undulating-type form is a substantially sinusoidal form.

47. (Previously Presented) The tyre of claim 46, wherein the substantially sinusoidal form has a wavelength greater than or equal to 2.5 mm and less than or equal to 30 mm.

48. (Previously Presented) The tyre of claim 46, wherein the substantially sinusoidal form has a wave amplitude greater than or equal to 0.12 mm and less than or equal to 1 mm.

49. (Previously Presented) The tyre of claim 45, wherein the undulating-type form is a helical-type form.

50. (Previously Presented) The tyre of claim 41, wherein the chafer is disposed between the at least one flipper and the at least one carcass ply.

51. (Previously Presented) The tyre of claim 41, wherein the chafer is disposed axially external with respect to the at least one carcass ply.

52. (Previously Presented) The tyre of claim 41, wherein the chafer is disposed axially internal with respect to the at least one carcass ply.

53. (Previously Presented) The tyre of claim 41, wherein the chafer is disposed between the two carcass plies.

54. (Previously Presented) The tyre of claim 31, wherein the at least one preformed metallic element comprises:

steel;
aluminum; or
an aluminum alloy.

55. (Previously Presented) The tyre of claim 31, wherein the at least one preformed metallic element comprises a coating, and wherein the coating comprises:

brass;
zinc;
zinc/manganese alloys;
zinc/cobalt alloys; or
zinc/cobalt/manganese alloys.

56. (Previously Presented) The tyre of claim 31, wherein the first elongated reinforcing elements comprise greater than or equal to two preformed metallic elements and

wherein the two or more preformed metallic elements are stranded together.

57. (Previously Presented) The tyre of claim 56, wherein the first elongated reinforcing elements comprise two or more preformed metallic elements, and wherein a stranding pitch of the two or more stranded preformed metallic elements is greater than or equal to 2.5 mm and less than or equal to 25 mm.

58. (Previously Presented) The tyre of claim 31, wherein a density of the first elongated reinforcing elements is greater than or equal to 40 cords/dm and less than or equal to 160 cords/dm.

59. (Previously Presented) The tyre of claim 42, wherein the at least one preformed element of the second elongated reinforcing elements comprises:
steel;
aluminum; or
an aluminum alloy.

60. (Previously Presented) The tyre of claim 42, wherein the at least one preformed element of the second elongated reinforcing elements comprises a coating, and

wherein the coating comprises:

- brass;
- zinc;
- zinc/manganese alloys;
- zinc/cobalt alloys; or
- zinc/cobalt/manganese alloys.

61. (Previously Presented) The tyre of claim 42, wherein the second elongated reinforcing elements comprise greater than or equal to two preformed elements and less than or equal to five preformed metallic elements.

62. (Previously Presented) The tyre of claim 42, wherein the second elongated reinforcing elements comprise two or more preformed elements, wherein the two or more preformed elements are stranded together, and wherein a stranding pitch of the two or more preformed elements is greater than or equal to 2.5 mm and less than or equal to 25 mm.

63. (Previously Presented) The tyre of claim 41, wherein a density of the second elongated reinforcing elements is greater than or equal to 40 cords/dm and less than or equal to 160 cords/dm.

64. (Previously Presented) The tyre of claim 31, wherein the first elongated reinforcing elements are disposed at an angle, relative to a radial plane of the tyre, greater than or equal to 15° and less than or equal to 60°.

65. (Previously Presented) The tyre of claim 41, wherein the second elongated reinforcing elements are disposed at an angle, relative to a radial plane of the tyre, greater than or equal to 15° and less than or equal to 70°.

66-67. (Cancelled)

68. (Previously Presented) The tyre of claim 31, wherein each of the metallic elements has a diameter greater than or equal to 0.05 mm and less than or equal to 0.12 mm.